



Sigma Product Information Sheet

TERGITOL DETERGENTS XD and XH

CAS NUMBER:

9038-95-3

GENERAL STRUCTURE:

$$\text{CH}_3 (\text{CH}_2)_3\text{-O-}[\text{CH}_2 \text{ CH}_2 \text{ O} / \text{CH}_2 \text{ CH}(\text{CH}_3)\text{O}]_x (\text{CH}_2 \text{ CH}_2 \text{ O})_y\text{H}$$

These two nonionic detergents are manufactured by Union Carbide through the reaction of propylene oxide with ethylene oxide. Both are supplied as white, waxy solids at room temperature, hazy liquids in the molten state. Both are chemically stable in the presence of dilute acids, bases and salts, and are compatible with anionic, cationic and other nonionic surfactants. Dilute aqueous solutions are clear and bright, whereas concentrated solutions (30% and above for XH) form clear gels. Both are soluble in chlorinated solvents and many polar organic solvents.

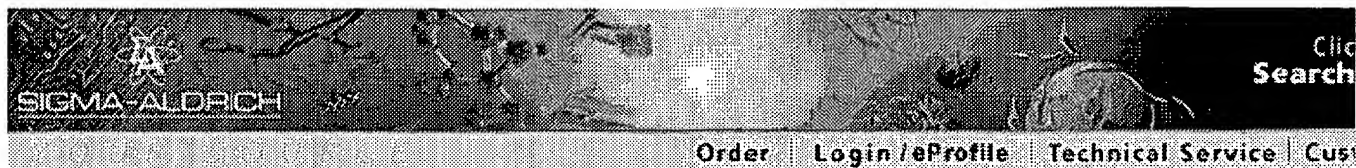
TYPICAL CHEMICAL AND PHYSICAL PROPERTIES:

Not to be used for specification purposes.

	XD	XH
Hydroxyl number (mg KOH/g)	18	15
Molecular weight (calc. from OH #)	3227	3740
Actives (wt %)	100	100
Cloud point (1% aqueous solution)	76 °C	99 °C
Pour point (°C)	35	44
pH (X% aqueous solution, at 25 °C)	6.5 (20%)	5.4 (10%)
Viscosity (cP at 50 °C)	251	319
Appearance (at 50 °C)	Hazy liquid	Hazy liquid
Specific gravity (at X/20 °C)	1.041 (40 °C)	1.048 (50 °C)
Surface tension (0.1 % aqueous solution, dynes/cm)	38	39
Critical micelle concentration (CMC)	0.000050 wt %	0.000069 wt %

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Product Number: NP-40

Product Name: Tergitol

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Synonyms: MDL number: MFCD00132411

[Description](#)

CAS Number: 127087-87-0

[Certificate of Analysis](#)

MDL Number: MFCD00132411

[MSDS](#)

[Structure Image](#)

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Low-melting solid

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